

**A near Optimum Dynamic Voltage Scaling (DVS) in
65nm Energy Efficient Power management with
Frequency Based Control (FBC) for SoC system
JSSCC November 2012**

- Two Separate Control Loops
 - o Power Loop: To control the supply Voltage VDVS.
 - o PLL Loop: to control the Operation Frequency FDFS.

- SIDO power module:** Power module based in a Single Inductor Dual Output used to generate two independent supply voltages using only one off-chip inductor.

[1] Y.-H. Lee, C.-C. Chiu, S.-Y. Peng, K.-H. Chen, Y.-H. Lin, C.-C. Lee, C.-C. Huang, and T.-Y. Tsai, "A near-optimum dynamic voltage scaling (DVS) in 65 nm energy-efficient power management with frequency-based control (FBC) for SoC system," *IEEE J. Solid-State Circuits*, vol. 47, no. 11, Nov. 2012